AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph [0015] of the specification with the following paragraph:

[0015] Figure 5 shows human (SEQ ID NO: 1), rat (SEQ ID NO: 2), and mouse (SEQ ID NO: 3) sequences for Dipeptidyl Peptidase IV during intestinal differentiation which is also useful in assays of preferred embodiments.

Please replace Paragraph [0068] of the specification with the following paragraph:

[0068] The presence of anti-Purkinje cell antibodies in some PCD patients suggests an autoimmune etiology. To identify the molecular targets for these autoantibodies, an Agt1 l cDNA expression library from human cerebellum was constructed and screened with IgG from a patient with paraneoplastic cerebellar degeneration. A single clone, pCDR2, produced a fusion protein that reacted strongly with the patient's IgG. Sequencing the pCDR clones revealed 6 amino acids repeated in tandem along the entire cDNA sequence (VAL, PRO, LEU, LEU, GLU, ASP) (SEQ ID NO:4). This gene was expressed predominantly in neuroectodermal tissues (68).

Please replace Paragraph [0078] of the specification with the following paragraph:

[0078] The following antigens, proteins, peptides, enzymes, tissue receptors, lymphocyte receptors, neurotransmitters listed below are representative of antigens used in assays of preferred embodiments.

MBP Sequence 87-106	VVHFFKNIVTPRTPPPSQGK (SEQ ID NO:5)
MBP Sequence 83-89	ENPVVHFFKNIVTPRTP (SEQ ID NO:6)
MBP Sequence 1-11	ASQKRPSQRSK (SEQ ID NO:7)
MBP Sequence 200-211	ANMQRQAVPTL (SEQ ID NO:8)
Proteolipid Protein Sequence 40-60	TGTEKLIETYFSKNYQDYEYL (SEQ ID NO:9)
Proteolipid Protein Sequence 89-106	GFYTTGAVRQIFGDYKTT (SEQ ID NO:10)
Proteolipid Protein Sequence 103-120	YKTTICGKGLSATVTGGQ (SEQ ID NO:11)
Proteolipid Protein Sequence 125-143	SRGQHQAHSLERVCHCLGK (SEQ ID NO:12)
Proteolipid Protein Sequence 139-154	HCLGKWLGHPDKFVGI (SEQ ID NO:13)
Transaldolase Protein Sequence 11-25	MESALDQLKQFTTVV (SEQ ID NO:14)
Transaldolase Protein Sequence 21-35	ETTVVADTGDFHAID (SEQ ID NO:15)

Transaldolase Protein Sequence 31-45 FHAIDEYKPQDATTN (SEQ ID NO:16)

Transaldolase Protein Sequence 71-85 KLGGSQEDQIKNAID (SEQ ID NO:17)

Transaldolase Protein Sequence 81-95 KNAIDKLFVLFGAEI (SEQ ID NO:18)

Transaldolase Protein Sequence 261-275 GELLQDNAKLVPVLS (SEQ ID NO:19)

Transaldolase Protein Sequence 271-285 VPVLSAKAAQASDLE (SEQ ID NO:20)

Transaldolase Protein Sequence 311-325 GIRKFAADAVKLERM (SEQ ID NO:21)

MOG Sequence 1-20 GQFRVIGPRHPIRALVGDEV (SEQ ID NO:22)

MOG Sequence 61-80 QAPEYRGRTELLKDAIGEGK (SEQ ID NO:23)

MOG Sequence 101-120 RDHSYQEEAAMELKVEDPFY (SEQ ID NO:24)

MOG Sequence 145-160 VFLCLQYRLRGKLRAE (SEQ ID NO:25)

MAG Sequence 37-60REIVDRKYSICKSGCFYQKKEEDW (SEQ ID NO:26)

Sodium Ion Channel Na 1.2 TVTVPIALGESDFENLNTEEFSSESDM (SEQ ID NO:27)

Na 1.3 TVTVPIAVGESDFENLNTEEFSSESEL (SEQ ID NO:28)

Na 1.1 TVTVPIAVGESDFENLNTEDFSSESDL (SEQ ID NO:29)

Na 1.6 TVRVPIAVGESDFENLNTEDVSSESDP (SEQ ID NO:30)

Glutamate Receptor ANEYERFVPFSDQQISNDAAC (SEQ ID NO:31)

Cerebellar peptides FLEDVPLLEDIPLLEDVPLLED (SEQ ID NO:32)

FLEDVPLLEDIPLLEDVP (SEQ ID NO:33)

LLEDTDFLEDPDFLEAID (SEQ ID NO:34)

Amyloid β DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA (SEQ ID NO:35)

CD69-Human MECEKNLYWICNKPYK (SEQ ID NO:36)

Zinc Finger Protein PYKCPECGKSFSQKSDLVKHQRTHTG (SEQ ID NO:37)

Glucose Regulated Protein-78 (GRP-78) EEEDKKEDVGTVVGI (SEQ ID NO:38)

Vasoactive Intestinal Peptide NYTRLRKQMAVKKYL (SEQ ID NO:39)

Gliadin Peptides QPFRPQQPYPQPQPQYSQPQQ (SEQ ID NO:40)

QPYPQPQPQYSQPQQPISQQQ (SEQ ID NO:41)

QFLGQQQPFPPQQPYPQPQPF (SEQ ID NO:42)

PLVQQQQFLGQQQPFPPQQPY (SEQ ID NO:43)

HNVVHAIILHQQQQQQQEQKQ (SEQ ID NO:44)

NPSQQQPQEQVPLVQQQ (SEQ ID NO:45)

QQLPQPQQPQQSFPQQQPF (SEQ ID NO:46)

Gluteomorphin YPFPGPIP (SEQ ID NO:47)

Casomorphin GYYPTYGGWL (SEQ ID NO:48)

Secretin (human) HSDGTFTSELSRLREGARLQRLLQGLV (SEQ ID NO:49)

Campylobacter Jejuni Toxin TPPLLAAILMLASLRSHIVSDHFPVNFRKF (SEQ ID NO:50)

α-S1 Casein

RPKHPIKHQGLPQEVLNENLLRFFVAPFPEVFGKEKVNELSKDIGSESTDEQAMED
IKQMEAESISSSEEIVPNSVEQKHIQKEDVPSERYLGYLEQLLRLKKYKVPQLEIVP
NSAEERLHSMKEGIHAQQKEPMIGVNQELAYFYPELFRQFYQLDAYPSGAWYYV
PLGTQYTDAPSFSDIPNPIGSENSEKTTMPLW (SEQ ID NO:51)

α-S2 Casein MKEGIHAQQK (SEQ ID NO:52)

YQKFALPQYL (SEQ ID NO:53)

K Casein KDERFFSDKI (SEQ ID NO:54)

SPPEINTVQV (SEQ ID NO:55)

Vasoactive Intestinal Peptide HSDAVFTDNYTRLRKQMAVKKYLNSILN (SEQ ID NO:56)

Somatostatin YSANSNPAMAPRERKAGCKNFFWKTFTSC (SEQ ID NO:57)

Substance P RQKPQQFFGLM (SEQ ID NO:58)

Oxytocin CYKQNCPLG (SEQ ID NO:59)

Pancreatic Peptide APLEPVYPGDNATPEQMAQYAADLRRYINMLTRPRY (SEQ ID NO:60)

Gastrin-1 EGPWLEEEEEAYGWMDF (SEQ ID NO:61)

Big Gastrin-1 ELGPQGPPHLVADPSKKQGPWLEEEEEAYGWMDF (SEQ ID NO:62)

Gastrin Releasing Peptide VPLPAGGGTVLTKMYPRGNHWAVGHLM (SEQ ID NO:63)

Enkephalin YGGFLM (SEQ ID NO:64)

β-Endorphin YGGFMTSEKSQTPLVTLFKNAIIKNAYKKGE (SEQ ID NO:65)

Big Endorphin CSCSSLMDKECVYFCHLDIIWVNTPEHVVPYGLGSPRS (SEQ ID NO:66)

Dynorphin A	YGGFLRRIRPKLKWDNQ (SEQ ID NO:67)	
Dynorphin B	YGGFLRRQFKVVT (SEQ ID NO:68)	
Serotonin Receptor	MPHLLSGFLEVTASPAPTWDAP (SEQ ID NO:69)	
	IFGHFFCNVFIAMDVMCCTASI (SEQ ID NO:70)	
	LKLAERPERSEFVLQNSDHCGK (SEQ ID NO:71)	
Fibrillin	SFRPGSRGGSRG (SEQ ID NO:72)	
Calreticullin	EQFLDGDGWTSRWIESGLQTSQ (SEQ ID NO:73)	
Motillin	FVPIFTYGELQRMQEKERNKGQ (SEQ ID NO:74)	
Chlamydia HSP-60	LKQIAAHAGKEGAIIFQQVM (SEQ ID NO:75)	
Human HSP-60	1-20	MLRLPTVFRQMRPVSRVLAP (SEQ ID NO:76)
	16-35	RVLAPHLTRAYAKDVKFGAD (SEQ ID NO:77)
	31-50	KFGADARALMLQGVDLLADA (SEQ ID NO:78)
	46-65	LLADAVAVTMGPKGRTVIIE (SEQ ID NO:79)
	61-80	TVIIEQSWGSPKVTKDGVTV (SEQ ID NO:80)
	76-95	DGVTVAKSIDLKDKYKNIGA (SEQ ID NO:81)
	91-110	KNIGAKLVQDVANNTNEEAG (SEQ ID NO:82)
	106-125	NEEAGDGTTTATVLARSIAK (SEQ ID NO:83)
	121-140	RSIAKEGFEKISKGANPVEI (SEQ ID NO:84)
	136-155	NPVEIRRGVMLAVDAVIAEL (SEQ ID NO:85)
	151-170	VIAELKKQSKPVTTPEEIAQ (SEQ ID NO:86)
	166-185	EEIAQVATISANGDKEIGNI (SEQ ID NO:87)
	181-199	EIGNIISDAMKKVGRKGVI (SEQ ID NO:88)
	195-214	RKGVITVKDGKTLNDELEII (SEQ ID NO:89)
	210-229	ELEIIEGMKFDRGYISPYFI (SEQ ID NO:90)
	225-244	SPYFINTSKGQKCEFQDAYV (SEQ ID NO:91)
	240-259	QDAYVLLSEKKISSIQSIVP (SEQ ID NO:92)
	255-275	QSIVPALEIANAHRKPLVIIA (SEQ ID NO:93)
	271-290	LVIIAEDVDGEALSTLVLNR (SEQ ID NO:94)
	286-305	LVLNRLKVGLQVVAVKAPGF (SEQ ID NO:95)
	301-320	KAPGFGDNRKNQLKDMAIAT (SEQ ID NO:96)

316-335	MAIATGGAVFGEEGLTLNLE (SEQ ID NO:97)
331-350	TLNLEDVQPHDLGKVGEVIV (SEQ ID NO:98)
346-365	GEVIVTKDDAMLLKGKGDKA (SEQ ID NO:99)
361-380	KGDKAQIEKRIQEIIEQLDV (SEQ ID NO:100)
376-395	EQLDVTTSEYEKEKLNERLA (SEQ ID NO:101)
391-410	NERLAKLSDGVAVLKVGGTS (SEQ ID NO:102)
406-425	VGGTDVEVNEKKDRVTDAL (SEQ ID NO:103)
421-440	VTDALNATRAAVEEGIVLGG (SEQ ID NO:104)
436-455	IVLGGGCALLRCIPALDSLT (SEQ ID NO:105)
451-470	LDSLTPANEDQKIGIEIIKR (SEQ ID NO:106)
466-485	EIIKRTLKIPAMTIAKNAGV (SEQ ID NO:107)
481-500	KNAGVEGSLIVEKIMQSSSE (SEQ ID NO:108)
496-515	QSSSEVGYDAMAGDFVNMVE (SEQ ID NO:109)
511-530	VNMVEKGIIDPTKVVRTALL (SEQ ID NO:110)
526-545	RTALLDAAGVASLLTTAEVV (SEQ ID NO:111)
541-560	TAEVVVTEIPKEEKDPGMGA (SEQ ID NO:112)
556-573	PGMGAMGGMGGGMGGGMF (SEQ ID NO:113)
437-460	VLGGGVLLLRVIPALDSLTPANED (SEQ ID NO:114)

Dipeptidylpeptidase peptides

Peptide 1	MKTPWRVLLGLLGAAALVTIITVPVVLLNK (SEQ ID NO:115)
Peptide 2	MAEYGNSSVFLENSTFDEFGH (SEQ ID NO:116)
Peptide 3	KRQLITEERIPNNTQWVTWSP (SEQ ID NO:117)
Peptide 4	NGTFLAYAQFNDTEVPLIEYS (SEQ ID NO:118)
Peptide 5	VTNATSIQITAPASMLIGDHY (SEQ ID NO:119)
Peptide 6	IQNYSVMDICDYDESSGRWNC (SEQ ID NO:120)
Peptide 7	NSFYKIISNEEGYRHICYFQI (SEQ ID NO:121)
Peptide 8	NVQMPSKKLDFIILNETKFWY (SEQ ID NO:122)
Peptide 9	PEDNLDHYRNSTVMSRAENFK (SEQ ID NO:123)
Peptide 10	TAHQHIYTHMSHFIKQCFSLP (SEQ ID NO:124)

Figure 5 shows sequences for Dipeptidyl Peptidase IV during intestinal differentiation which is also useful in assays of preferred embodiments. Figure 5 compares the amino acid sequences of human, rat, and mouse DPP IV, respectively. These sequences are aligned. The potential sites for phosphorylation (T or S) and for N-glycosylation (NXT) are displayed as underlined. Preferred embodiments include the sequences listed above, along with counterparts which have post-translational modifications.

Please replace Paragraph [0122] of the specification with the following paragraph:

[0122] Gliadin peptides QQLPQPQQPQQSFPQQQPF (SEQ ID NO:125), LQLQPFPQPQLPYPQPQLPY (SEQ ID NO:126) - P Q P L P Y P Q P Q P F (SEQ ID NO:127), QQPQQFZPQQPYPZXZPZLGZZZPFPPZ (SEQ ID NO:128), gluteomorphin ZGZPGYYPTSPZZPGQEQ (SEQ ID NO:129), casomorphin ZTZSLVYPFPGPIPNSLP (SEQ ID NO:130), B-casein LHLPLPLLZSWMHZPHZPL (SEQ ID NO:131) and CD69 antibody binding epitope MECEKNLYWICNKPYK (SEQ ID NO:132) were synthesized by Bio-Synthesis Inc. (Lewisville, TX). Dipeptidylpeptidase IV (CD26), streptokinase (SK), lipopolysaccharide (LPS), human serum albumin (HSA), mercury [o-carboxyphenyl) Thio] ethyl mercury sodium salt (Thimerosal) were purchased from Sigma (St. Louis, MO).

Please replace Paragraph [0136] of the specification with the following paragraph:

[0136] ***Gliadin peptides***: Gliadin peptide QQLPQPQQPQQSFPQQQPF (SEQ ID NO:125) and *Chlamydia trachomatis* HSP-60 peptide LKQIAAHAGKEGAIIFQQVM (SEQ ID NO:133), HPLC grade, were synthesized by Bio-Synthesis Inc. (Lewisville, TX).

AMENDMENTS TO THE DRAWINGS

Enclosed please find corrected Figure 5 with red ink markings designating the proposed changes to the drawing in this application for which approval by the Examiner is requested. Also enclosed is an amended version of Figure 5. Figure 5 has been amended to add sequence identification numbers 1-3 to the sequence.